II. REMARKS AND ARGUMENTS

A. Status of the Claims

Claims 1, 4-6, and 9-13 are pending. Claims 2-5 and 7-8 were previously cancelled without prejudice. Applicants respectfully submit that no new matter has been added by virtue of this amendment.

B. Claim Rejections - 35 U.S.C. § 102

1. Rejection of claims 1, 5, 6 and 10 under 35 U.S.C. § 102(b) in view of Sonenshein

The Examiner rejected claims 1, 5, 6 and 10 under 35 U.S.C. § 102(b) as anticipated by Sonenshein et al. (J. Bacteriol., Vol. 132, No.1, 73-79, 1977).

Independent claim 1 of the present application recites:

> Claim 1. A method for identifying **an agent that binds to a bacterial RNAP homologous RNA-exit-channel amino-acid sequence in a bacterial RNAP**, comprising the steps of: (a) preparing a reaction solution including the agent to be tested and **a bacterial RNAP that contains a bacterial RNAP homologous RNA-exit-channel amino-acid sequence**; and (b) detecting at least one of the presence, extent, concentration-dependence, or kinetics of binding of the agent to **the homologous bacterial RNAP RNA-exit-channel amino-acid sequence.**

The invention of claim 1 is directed to a method of identifying agents that bind to a bacterial RNAP homologous RNA-exit-channel amino-acid sequence in a bacterial RNAP. Claim 1 cannot possibly be anticipated by the Sonenschein et al reference, as this reference makes absolutely no mention of the target sequence of claim 1--the homologous bacterial RNAP RNA-exit-channel amino acid sequence. The Sonenschein et al reference also provides no information that connects, or could be used to connect, the compound studied in that reference,

lipiarmycin, to the target sequence of the method of claim 1--the homologous bacterial RNAP RNA-exit-channel amino acid sequence. It is only in the present application that information connecting or that could be used to connect lipiarmycin to the target sequence of the method of claim 1 is provided.

As such, one of skill in the art would not be taught the method of claim 1, which identifies agents which bind to a bacterial RNAP homologous RNA-exit-channel amino-acid sequence in a bacterial RNAP from the teaching of the Sonenschein et al reference. As the Sonenschein et al. reference does not teach the target sequence of claim 1, it cannot possibly anticipate claim 1. As claims 5, 6 and 10 depend from claim 1, these claims also cannot be anticipated by the Sonenschein patent.

As explained by the Applicants above -- and contrary to the Examiner's argument in the Office Action -- the Sonenschein et al. reference does not teach the homologous bacterial RNAP RNA-exit-channel amino acid sequence of claim 1. The Examiner's assertion that the homologous bacterial RNAP RNA-exit-channel amino acid sequence of claim 1 is found in the Sonenschein et al. reference appears to be based on the Examiner's own knowledge. As such, Applicants respectfully request that, if this rejection is not withdrawn, the Examiner, pursuant to 37 C.F.R. §1.104(d)(2), provide an affidavit pertaining to this matter, so that Applicants may properly address the issue.

2. Rejection of claims 1 and 4 under 35 U.S.C. § 102(b) in view of Sergio

Claims 1 and 4 are rejected under 35 U.S.C. § 102(b) as being anticipated by Sergio et al. (J. Antibiotic., Vol. 28, No.7, 543-549, 1975)

The Sergio et al. reference also makes no mention of the target sequence of the method of claim 1--the homologous bacterial RNAP RNA-exit-channel amino acid sequences and therefore

cannot possibly anticipate the method of claim 1. Therefore, claim 1 cannot possibly be anticipated by the Sergio et al. reference. The Sergio et al reference also provides no information that connects, or could be used to connect, the compound studied in that reference, lipiarmycin, to the target sequence of the method of claim 1--the homologous bacterial RNAP RNA-exit-channel amino acid sequence. It is only in the present application that information connecting or that could be used to connect lipiarmycin to the target sequence of the method of claim 1 is provided.

As such, one of skill in the art would not be taught the method of claim 1, which identifies agents which bind to a bacterial RNAP homologous RNA-exit-channel amino-acid sequence in a bacterial RNAP from the teaching of the Sergio et al. reference. As the Sergio et al. reference does not teach the target sequence of claim 1, it cannot possibly anticipate claim 1. As claim 4 depends from claim 1, this claim also cannot be anticipated by the Sergio patent.

As explained by the Applicants above -- and contrary to the Examiner's argument in the Office Action -- the Sergio et al. reference does not teach the homologous bacterial RNAP RNA-exit-channel amino acid sequence of claim 1. The Examiner's assertion that the homologous bacterial RNAP RNA-exit-channel amino acid sequence of claim 1 is found in the Sergio et al. reference appears to be based on the Examiner's own knowledge. As such, Applicants respectfully request that, if this rejection is not withdrawn, the Examiner, pursuant to 37 C.F.R. §1.104(d)(2), provide an affidavit pertaining to this matter, so that Applicants may properly address the issue.

3. <u>Rejection of claims 1, 4 and 11 under 35 U.S.C. § 102(b) in view of Talpaert</u>

Claims 1, 4 and 11 are rejected under 35 U.S.C. § 102(b) as being anticipated by Talpaert et al. (Bioch. Biophy. Res. Comm, 63(1):328-334).

Contrary to the Examiner's assertion in the Office Action, the Talpaert et al. reference makes no mention of the target sequence of the method of claim 1--the homologous bacterial RNAP RNA-exit-channel amino acid sequences and therefore cannot possibly anticipate the method of claim 1. Therefore, claim 1 cannot possibly be anticipated by the Talpaert et al. reference. The Talpaert et al. reference also provides no information that connects, or could be used to connect, the compound studied in that reference, lipiarmycin, to the target sequence of the method of claim 1--the homologous bacterial RNAP RNA-exit-channel amino acid sequence. It is only in the present application that information connecting or that could be used to connect lipiarmycin to the target sequence of the method of claim 1 is provided.

As such, one of skill in the art would not be taught the method of claim 1, which identifies agents which bind to a bacterial RNAP homologous RNA-exit-channel amino-acid sequence in a bacterial RNAP from the teaching of the Talpaert et al. reference. As the Talpaert et al. reference does not teach the target sequence of claim 1, it cannot possibly anticipate claim 1. As claim 4 depends from claim 1, this claim also cannot be anticipated by the Talpaert patent.

As explained by the Applicants above -- and contrary to the Examiner's argument in the Office Action -- the Talpaert et al. reference does not teach the homologous bacterial RNAP RNA-exit-channel amino acid sequence of claim 1. The Examiner's assertion that the homologous bacterial RNAP RNA-exit-channel amino acid sequence of claim 1 is found in the Talpaert et al. reference appears to be based on the Examiner's own knowledge. As such, Applicants respectfully request that, if this rejection is not withdrawn, the Examiner, pursuant to 37 C.F.R. §1.104(d)(2), provide an affidavit pertaining to this matter, so that Applicants may properly address the issue.

C. Claim Rejections - 35 U.S.C. § 103

1. Rejection of claims 12 and 13 under 35 U.S.C. § 103(a) over Talpaert in view of Young

Claims 12 and 13 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Talpaert et al. (cited above) in view of Young et al. (U.S. Patent 5,919,666).

As explained above, the Talpaert et al. reference does not teach the target sequence of claim 1, and therefore it cannot possibly anticipate claim 1. The Talpaert et al. reference also does not contain any suggestion of the target sequence of claim 1 (i.e. --the homologous bacterial RNAP RNA-exit-channel amino acid sequence) and provides absolutely no information that connects, or could be used to connect, the compound studied in those references, lipiarmycin, to the target sequence of claim 1. As a result, the Talpaert et al. reference cannot render claim 1 obvious. As claims 12 and 13 depend from claim 1, these claims likewise cannot be rendered obvious by claim 1.

The Examiner cites to the Young reference for its alleged disclosure of human RNAP and human RNAPII. The Young reference, however, does not teach or suggest the target sequence of claim 1 (i.e. --the homologous bacterial RNAP RNA-exit-channel amino acid sequence). Therefore, it cannot cure the deficiency of the Talpaert reference.

In view of the above, Applicant respectfully submits that claims 12 and 13 are not rendered obvious by the Talpaert et al. reference in view of the Young reference.

2. Rejection of claim 9 under 35 U .S.C. § 103(a) over Sonenshein in view of Talpaert or Sergio.

Claim 9 is rejected under 35 U .S.C. § 103(a) as being unpatentable over Sonenshein et al. (cited above) in view of Talpaert et al. or Sergio et al. (cited above).

As explained above, the Sonenshein et al. reference does not teach the target sequence of method claim 1, and therefore it cannot possibly anticipate claim 1. The Sonenshein et al. reference also does not contain any suggestion of the target sequence of claim 1 (i.e. --the homologous bacterial RNAP RNA-exit-channel amino acid sequence) and provides absolutely no information that connects, or could be used to connect, the compound studied in those references, lipiarmycin, to the target sequence of claim 1. As a result, the Talpaert et al. reference cannot render claim 1 obvious. As claim 9 depends from claim 1, this claim likewise cannot be rendered obvious by claim 1.

The Examiner cites to the Talpaert et al. or Sergio et al. references for their alleged teaching of "methods of identifying an agent that binds to RNAP homologous RNA exit channel amino acid sequence in E. coli RNAP. However, as discussed above, neither the Talpaert et al. or Sergio et al. references even mention the homologous RNA exit channel amino acid sequence of independent claim 1, let alone teach or suggest the use of this target sequence in the method of claim 1. Therefore, these references cannot cure the deficiency of the Sonenshein et al. reference.

In view of the above, Applicant respectfully submits that claim 9 is not rendered obvious by the Sonenshein et al. in view of Talpaert et al. or Sergio et al.

Conclusion

It is believed that the present Response has been timely filed and that no fees are due for this submission. However, if it is determined that any additional fees are due or any fee has been overpaid, the Commissioner for Patents is hereby authorized to charge said fee or credit any overpayment to Deposit Account No. 50-0552.

An early and favorable response on the merits is earnestly solicited.

Respectfully submitted
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